



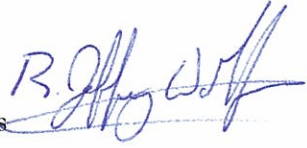
TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

TO: All Chief District Engineers

FROM: R. Jeffrey Wolfe, P.E.
Director
Division of Traffic Operations 

DATE: March 20, 2012

SUBJECT: Signing for High-Water Conditions

Attached is a modified policy for Roadway Surface Condition Signs in the Traffic Operations Guidance Manual. This policy includes modifications for signing of high-water conditions. In addition, an exhibit has been added to illustrate proper installation of the associated signing.

The Cabinet will no longer use black on yellow warning signs with the legend HIGH WATER POSSIBLE for permanent installations in advance of areas that frequently flood. To be consistent with the 2009 MUTCD, we will now use black on yellow warning signs with the legend ROAD MAY FLOOD. If used, these signs should be installed in advance of the typical warning sign placement to accommodate the installation of temporary warning signs when needed (as discussed in the following paragraph). Existing signs may remain in the field until the end of their useful life. New sign installations should utilize the new ROAD MAY FLOOD message.

The new policy also gives Districts a signing option for temporary signs during actual high-water events. If used, these signs shall have a black legend of WATER OVER ROADWAY on a fluorescent orange background. Districts should discontinue the use of any other messages/layouts for temporary signing of such conditions as soon as possible.

Initially, the Cabinet considered the use of fluorescent pink sheeting for the temporary ROAD MAY FLOOD signs as fluorescent pink is allowed by the MUTCD for incident management situations. However, there is currently no fluorescent pink sheeting on our Approved Products List. As a result, we elected to use a fluorescent orange background since this color is acceptable for all temporary traffic control situations.

Sheeting versions of the two signs are available from the Central Office sign shop. For Districts that prefer roll-up versions of the temporary WATER OVER ROADWAY signs, the Division of Maintenance has added this sign to their rollup-sign contract.

If you have any questions regarding this policy, please contact Jeff Wolfe in the Division of Traffic Operations.

c: Traffic Engineering Branch
Nancy Albright



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**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KY 40622**

MANUAL TITLE: Traffic Operations Guidance Manual

REVISION NO.: 6

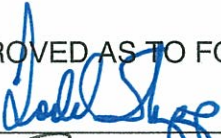

DATE REQUESTED: March 7, 2012


REPRINT: _____

REQUESTED BY: Brad Webb

NEW: _____

<h2>REVISED POLICY</h2>

CHAPTER/ SECTION	EXPLANATION	OLD PAGES TO BE DELETED	NEW PAGES TO BE ADDED
	The purpose of this printing is to include the following revised policy in the <i>Traffic Operations Guidance Manual</i> . This revision also includes two index updates and one new exhibit.		
TO-00	Table of Contents	TO-01	TO-01
TO-400	Warning Signs: Roadway Surface Condition Signs	TO-403-2	TO-403-2
TO-9900	Table of Exhibits Signing for Flood Areas	TO-9900	TO-9900 Exhibit 24
Produced & Distributed by Organizational Management Branch	APPROVED AS TO FORM AND LEGALITY  _____ Office of Legal Services		
	 _____ Michael Hancock Secretary		
	<u>3/14/12</u> _____ Date		

 <p>TRAFFIC OPERATIONS</p>	<p><i>Section</i></p> <p>WARNING SIGNS</p>
	<p><i>Subject</i></p> <p>Roadway Surface Condition Signs</p>

**ICE POSSIBLE
AHEAD SIGNS:**

At locations where water has a tendency to pond and freeze, ICE POSSIBLE AHEAD signs may be installed.

**ROAD MAY FLOOD
SIGNS:**

At locations with frequent flooding, permanent ROAD MAY FLOOD signs (W8-18) may be installed. These signs shall have a black legend on a yellow background. Signs shall be installed in advance of the limits of a typical high water event at an approximate distance of 200 feet plus the advance warning distance from Table 2C-4 of the MUTCD (see **Exhibit 24**).

**WATER OVER
ROADWAY SIGNS:**

During weather events where water actually covers the highway, temporary WATER OVER ROADWAY signs may be installed at the discretion of the district. These signs shall have a black legend on a fluorescent orange background. Signs shall be installed in advance of the limits of the high water event at the advance warning distance from Table 2C-4 of the MUTCD (see **Exhibit 24**).

**SLIPPERY WHEN
WET SIGNS:**

SLIPPERY WHEN WET signs (W8-5) may be installed using the following process:

1. The district Traffic Engineering and Permits Section shall serve as the primary contact for requests involving pavement slickness. In order to minimize the number of unnecessary skid tests, the initial investigation should rule out other potential contributing factors to wet pavement crashes such as rutting, ponding of water, high shoulders, and other drainage issues. The Project Delivery and Preservation Branch should be contacted to assist in evaluating these concerns. Other contributing factors may include poor visibility, signing, geometry, etc. If skid resistance is considered the likely problem upon completion of the initial investigation, testing shall be requested.

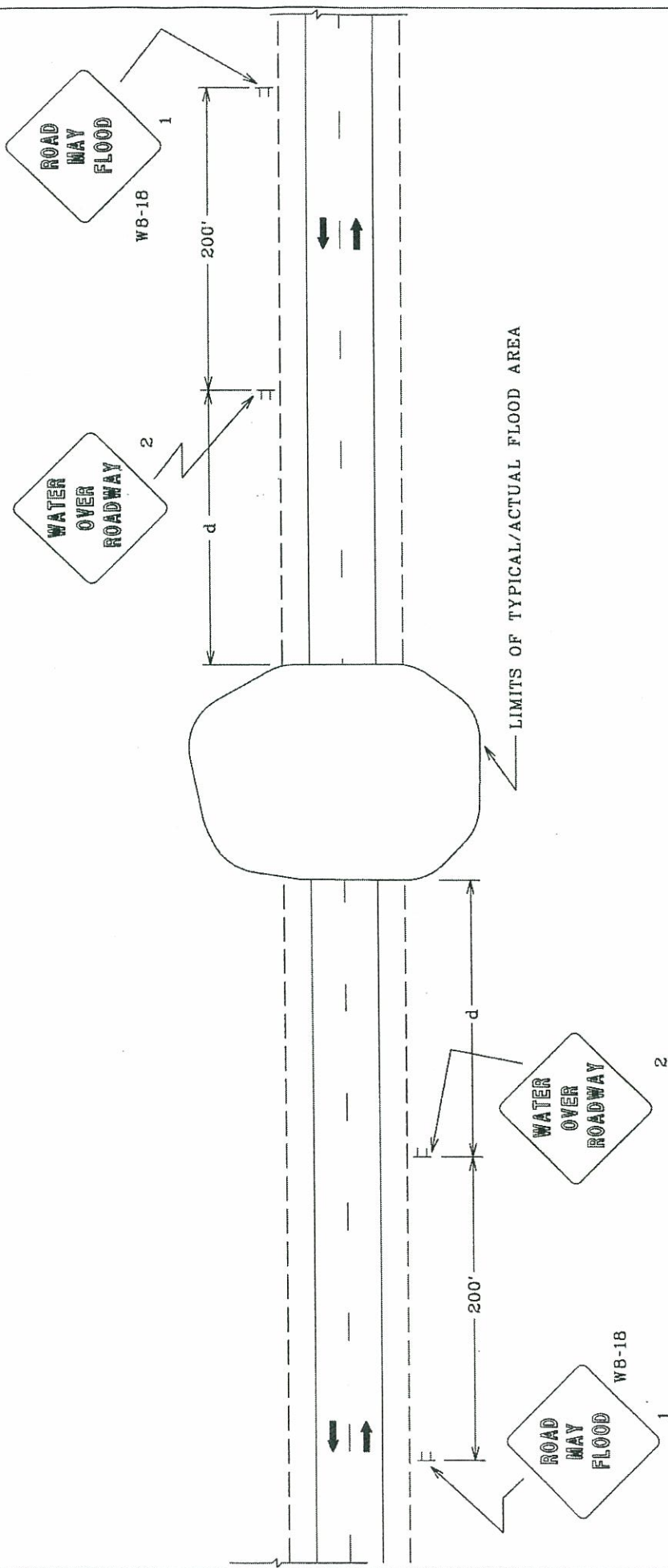


2. The district shall submit a request for skid testing directly to the Division of Materials. A copy of this request (along with supporting documentation) shall be sent to Central Office Division of Traffic Operations.
3. The Division of Materials shall conduct the test and forward the results to the Division of Traffic Operations, Division of Maintenance, and the district traffic engineer.
4. The following actions shall be taken based on the results of the skid test:

Skid Number	Action
39 or Greater	No further action is necessary
27 to 38	Section will be incorporated into the resurfacing program evaluation process with demerit points assigned for friction. These pavements should continue to be tested on a regular schedule until treatment is applied. SLIPPERY WHEN WET signage should be installed for pavements in this range.
26 or Below	Improvement should be given a high priority. Alternative treatments and funding sources should be considered if the pavement is not a good candidate for resurfacing. SLIPPERY WHEN WET signage should be installed for pavements in this range.

5. Regardless of the results of the skid test, SLIPPERY WHEN WET signs may be installed by the district if the crash data suggests a crash pattern that may be addressed by the installation of these devices.
6. SLIPPERY WHEN WET signs shall be removed when the surface conditions that warranted the signing have been addressed.





1. ROAD MAY FLOOD SIGN IS A PERMANENT SIGN WITH YELLOW BACKGROUND. SIGN SHOULD BE INSTALLED IN ADVANCE OF AREAS PRONE TO FLOODING.
2. WATER OVER ROADWAY IS A TEMPORARY SIGN WITH FLUORESCENT ORANGE BACKGROUND. SIGN MAY BE INSTALLED AT THE DISCRETION OF THE DISTRICT DURING A WEATHER EVENT WHERE WATER IS IN THE ROADWAY.
3. ADVANCE PLACEMENT DISTANCE "d" SHALL BE DETERMINED FROM TABLE 2C-4 OF THE MUTCD.